

## Studies on West Indian Scolytidae (Coleoptera) 3.

### Checklist of Scolytidae of the West Indies, with descriptions of new species and taxonomic notes

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#### Abstract

A checklist of all species of Scolytidae (Coleoptera) known to occur in the West Indies is presented. One hundred ninety species and their New World synonyms are listed. New species described are: *Ambrosiodmus klapperichi* (Dominican Republic, Dominica) *Pityophthorus confractus* (Jamaica), *P. hispanolus* (Dominican Republic) and *P. pinavorus* (Florida, Dominican Republic). The female of *Bothrostermus isolatus* Bright is described. New synonymy are: *Ambrosiodmus obliquus* (LeConte) (= *Xyleborus pseudobrasiliensis* Eggers); *Chramesus opacicollis* Eggers (= *C. brevisetosus* Bright); *Phloeotribus setulosus* Eichhoff (= *P. atlanticus* Schedl) and *Xyleborinus gracilis* (Eichhoff) (= *Xyleborus aspericauda* Eggers and *X. neogracilis* Schedl). *Xyleborus longulus* Schedl is transferred to *Xyleborinus*.

#### Introduction

During the past several years, opportunities have become available to examine several collections of Scolytidae from the West Indies. As a result, a number of undescribed species were named, and new locality records and other items of taxonomic interest were published (Bright 1972, 1981b, 1982). To conclude this preliminary phase of the study, I have prepared a check list of all species of Scolytidae known to occur in the West Indies. The opportunity is also taken to complete the naming of several undescribed species in the material at hand.

The names in this checklist have been checked and corrected as far as possible. However, no assurance can yet be given that each name represents a valid species, even though the types of most species have been examined. This is particularly true of species in genera such as *Scolytodes* and *Araptus* where a number of species were described by Schedl or Eggers from poorly mounted or damaged specimens or uniques and species differences are very minute.

The geographic area covered in this checklist includes the Bahamas and the Greater and Lesser Antilles; Trinidad is excluded as are the small islands off the north coast of Ve-

nezuela. Only West Indian distributions are listed by islands. Extraterritorial distributions of many of the included species can be found in Wood (1982).

The arrangement of subfamilies and tribes follows Wood (1982). Genera and species are listed alphabetically for ease in locating specific names. Species synonymy refers only to New World taxa. Generic synonymy can be located in Wood (1982).

One hundred and ninety species are presently known from the West Indies. However, the degree of completeness in coverage of the various islands varies considerably. Most of the islands are poorly collected with the exceptions of Jamaica, Cuba, Guadeloupe, Dominica and the Virgin Islands. Since no scolytid specialist has ever collected on these islands, it is anticipated that many species remain to be discovered. Prior to my 1972 paper on the bark beetle fauna of Jamaica, only 19 species were known to occur on the island; I reported on almost 70, nearly a four-fold increase. It is hoped that this checklist will stimulate more collecting in the West Indies of this group of beetles.

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### Check list of West Indian Scolytidae

Localities are shortened as follows: Andres Island = Andr. I., Antilles = Ant., Bahamas = Bah., Barbados = Barb., Bermuda = Berm., Cuba = Cuba, Dominican = Dom., Dominican Republic = Dom. Rep., Grand Cayman = Grd. Caym., Grand Turk = Grd. Turk, Grenada = Gren., Guadeloupe = Guadel., Haiti = Haiti, Jamaica = Jam., Jost van Dyke Islands = Jost v. Dyke Is., Man O'War Cay = Man O'War Cay, Martinique = Mart., Mona Island = Mona I., Puerto Rico = PR, St. Lucia = St. Lucia, St. Thomas = St. Thom., Tortola (BWI) = Tort., St. Vincent = St. Vinc., St. Vincent Is. = St. Vinc. Is., Virgin Islands = Virg. Is., Widespread = Widespr..

New locality records are marked by an asterisk.

#### Subfamily Hylesininae Erichson

##### Tribe Hylastini LeConte

*Hylastes* Erichson, 1836, p. 47

*suspectus* Bright, 1972, p. 31, Jam.

##### Tribe Hylesinini Erichson

*Phloeoborus* Erichson, 1836, p. 54

*scaber* Erichson, 1836, p. 55, Jam.

*caelatus* Blanchard, 1846, p. 204

*sericeus* Chapuis, 1869, p. 13

*opacithorax* Schedl, 1940b, p. 205

Tribe **Phrixosomini** Wood

- Phrixosoma** Blandford, 1897, p. 148  
*caraicum* Schedl, 1966, p. 101, Guadel.  
*parva* Blackman, 1943b, p. 393, Cuba

Tribe **Bothrosternini** Blandford

- Bothrosternus** Eichhoff, 1868b, p. 150  
*isolatus* Bright, 1972, p. 28, Dom., Guadel., Jam.

- Cnesinus** LeConte, 1868, p. 171  
*cubensis* Blackman, 1943b, p. 371, Cuba  
*gracilis* Blandford, 1896, p. 141, Dom.  
*substrigatus* Blackman, 1943b, p. 376  
*guadeloupensis* Eggers, 1940, p. 137, Guadel.  
*insularis* Eggers, 1940, p. 138, Guadel.  
*longicollis* Eggers, 1940, p. 137, Guadel.  
*marginicollis* Eggers, 1931a, p. 15, Ant.(?)

- Pagiocerus** Eichhoff, 1868, p. 148  
*frontalis* (Fabricius), 1801, p. 389, Wide-spread

- rimosus* Eichhoff, 1868b, p. 148  
*hubbardi* Schwarz, 1886, p. 54  
*fiorii* Eggers, 1908, p. 215  
*zeae* Eggers, 1928, p. 92  
*chiriquensis* Eggers, 1928, p. 92  
*nitidus* Eggers, 1931b, p. 170  
*carabicus* Eggers, 1940, p. 137

Tribe **Phloeotribini** Chapuis

- Phloeotribus** Latreille, 1804, p. 108  
*insularis* Eggers, 1940, p. 123, Dom., Guadel.  
*setulosus* Eichhoff, 1868b, p. 149, Cuba, Jam.

- rudis* Eichhoff, 1868b, p. 149  
*dubius* Eichhoff, 1868b, p. 150  
*asperatus* Blandford, 1897, p. 166  
*sodalis* Blandford, 1897, p. 168  
*spinipennis* Eggers, 1931b, p. 168  
*bolivianus* Eggers, 1933, p. 5  
*atlanticus*, Schedl, 1951, p. 81, **new synonymy**

Tribe **Phloeosinini** Nusslin

- Chramesus** LeConte, 1868, p. 168  
*opacicolis* Eggers, 1940, p. 124, Cuba, Dom., Gren., Guadel., Jam.  
*brevisetosus* Bright, 1972, p. 40, **new synonymy**

- opacicolis* var. *nitidus* Eggers, 1940, p. 124, Mart.

- robustus* Schedl, 1949b, p. 264, Cuba  
*rotundatus* (Chapuis), 1869, p. 47, Guadel., Mart., P. R.

- bonnairei* Reitter, 1913, p. 32  
*deplanatus* Eggers, 1940, p. 124

- Cladoctonus** Strohmeier, 1911, p. 17  
*brevisetosus* Bright, 1972, p. 46, Jam.  
*cubensis* Wood, 1961b, p. 105, Cuba  
*interruptus* (Eggers), 1941b, p. 126, Guadel.  
*major* (Eggers), 1940, p. 125, Guadel.  
*sentus* (Wood), 1961a, p. 3, Grd. Caym.\*

- Dendrosinus** Chapuis, 1869, p. 236  
*bourrieriae* Schwarz, 1920, p. 225, Bah.\*, Jam., P. R.

- lima* Eggers, 1931b, p. 166

- Phloeosinus** Chapuis, 1869, p. 37  
*serratus* (LeConte), 1868, p. 170, Jam.  
*utahensis* Swaine, 1915, p. 363  
*rugosus* Swaine, 1917, p. 9  
*juniperi* Swaine, 1917, p. 10  
*aciculatus* Bruck, 1931, p. 127  
*neotropicus* Schedl, 1939, p. 12

Tribe **Hypoborini** Nusslin

- Chaetophloeus** LeConte, 1876, p. 382  
*atlanticus* Bright, 1981b, p. 158, Bah.  
*chapini* (Blackman), 1943b, p. 390, Jam.  
*cubensis* Bright, 1981b, p. 159, Cuba  
*howdeni* Bright, 1972, p. 36, Jam.  
*insularis* (Blackman), 1940, p. 400, Cuba  
**Liparthrum** Wollaston, 1864, p. 265  
*hispaniolum* Bright, 1981b, p. 161, Dom. Rep.

- Trypanophellos** Bright, 1982, p. 166  
*neocopinus* Bright, 1982, p. 166, Cuba

Subfamily **Scolytinae** LatreilleTribe **Scolytini** Latreille

- Cnemonyx** Eichhoff, 1868b, p. 150  
*ficus* (Schwarz), 1894b, p. 44, Andr. I., Gr. Turk, St. Croix, Turk, Virg. Is.  
*nubilus* Blackman, 1943b, p. 380  
*vagabundus* (Wood), 1961, p. 89, Antigua, Dom. Rep., Jost van Dyke I., Mona I. (P. R.), St. Vinc., Virg. I.  
**Scolytopsis** Blandford, 1896, p. 123  
*cubensis* Wood, 1967, p. 123, Cuba  
**Scolytus** Geoffroy, 1762, p. 309  
*dimidiatus* Chapuis, 1869, p. 57, Cuba

Tribe **Ctenophorini** Chapuis

**Gymnochilus** Eichhoff, 1868, p. 399  
*insularis* (Eggers), 1932, p. 232, Dom.,  
 Guadel.

**Microborus** Blandford, 1897, p. 175  
*imitans* Eggers, 1940, p. 131, Guadel.  
*boops* Blandford, 1897, p. 175, Jam.  
*lautus* Wood, 1961b, p. 101, P. R.  
*lectus* Wood, 1971, p. 17, Dom.

**Pycnarthrum** Eichhoff, 1878, p. 104  
*hispidium* (Ferrari), 1867, p. 19, Wi-  
 despr.

*lambottei* Chapuis, 1869, p. 42  
*gracile* Eichhoff, 1878, p. 104  
*quadraticolle* Eichhoff, 1878, p. 41  
*transversum* Blandford, 1897, p. 177  
*reimoseri* Schedl, 1934, p. 208  
*reticulatum* Schedl, 1940a, p. 335, Jam.  
*fici* Wood, 1971, p. 11

**Scolytodes** Ferrari, 1867, p. 77  
*cubensis* (Schedl), 1972, p. 56, Cuba  
*discredens* (Eggers), 1940, p. 133, Gua-  
 del.

*glaber* (Eichhoff), 1868, p. 400, Cuba  
*guayanaensis* (Schedl), 1937, p. 13, Gua-  
 del.

*imitans* (Eggers), 1940, p. 136, Guadel.  
*insularis* (Schedl), 1952, p. 358, Guadel.  
*longicollis* (Eggers), 1951, p. 152, Gua-  
 del.

*maurus* (Blandford), 1897, p. 178,  
 Dom.\*

*ellipticus* Eggers, 1934, p. 80  
*nitidissimus* (Eggers), 1940, p. 135, Gua-  
 del.

*notatus* (Eggers), 1940, p. 133, Dom.,  
 Guadel.

*oblongus* (Eggers), 1940, p. 134, Guadel.

*ovalis* (Eggers), 1940, p. 132, Guadel.

*pseudobicolor* (Eggers), 1940, p. 132,  
 Cuba, Guadel., P. R.

*striatulus* Wood, 1979, p. 136

*striatum* Eggers, 1940, p. 139 not Eg-  
 gers, 1934, p. 79, Guadel.

*subparallelus* (Eggers), 1940, p. 134,  
 Guadel.

Tribe **Micracini** LeConte

**Hylocurus** Eichhoff, 1872, p. 133  
*alienus* Eichhoff, 1878, p. 301, Cuba  
*cuspidatus* Eggers, 1951, p. 153, Cuba  
*elegans* Eichhoff, 1872, p. 134, Haiti,  
 Jam.\*

*minor* Wood, 1961a, p. 4

*quadrispinosus* Blackman, 1928, p. 191,  
 Cuba

**Micracis** LeConte, 1868, p. 164

*cubensis* Blackman, 1928, p. 193, Cuba  
*swaini* Blackman, 1920, p. 32, Cuba

*populi* Swaine, 1920, p. 31

*robustus* Schedl, 1948, p. 576

*pygmaeus* Schedl, 1948, p. 577

*photophilus* Wood, 1956, p. 149

**Micracisella** Blackman, 1928, p. 192

*nanula* (LeConte), 1876, p. 368, Bah.\*

**Pseudothysanoes** Blackman, 1920, p. 46  
*dislocatus* (Blackman), 1920, p. 51, Virg.  
 Is.\*

*insularis* (Blackman), 1943c, p. 359,  
 Cuba

*minor* (Blackman), 1928, p. 207, Cuba  
*securigerus* (Blackman), 1943c, p. 364,  
 Haiti, P. R.

**Thysanoes** LeConte, 1876, p. 369

*fimbricornis* LeConte, 1876, p. 370.  
 (ident.?), Cuba\*

Tribe **Dryocoetini** Lindeman

**Coccotrypes** Eichhoff, 1878, p. 308

*advena* Blandford, 1894b, p. 100, Cuba  
*cubanus* Eggers, 1934, p. 79

*nuciferus* Schedl, 1938b, p. 10

*carphophagus* (Hornung), 1842, p. 116,  
 Berm., Cuba, Gren., Jam., P. R., Virg.,  
 Is.

*thrinacis* Hopkins, 1915, p. 46

*bakeri* Hopkins, 1915, p. 46

*anonae* Hopkins, 1915, p. 46

*hubbardi* Hopkins, 1915, p. 46

*rollinae* Hopkins, 1915, p. 47

*punctulatus* Eggers, 1951, p. 151

*confusus* (Eggers), 1940, p. 106, Jam.

*cyperi* (Beeson), 1929, p. 230, Guadel.,  
 Jam., Mart., P. R.

*conspiciens* Schedl, 1936, p. 110

*insularis* Eggers, 1940, p. 127

*insularis* Eggers, 1940, p. 129

*subimpressus* Eggers, 1940, p. 127

*caraibicus* Schedl, 1952, p. 345

*eggersi* Schedl, 1952, p. 347

*dactyliperda* (Fabricius), 1801, p. 387,  
 Cuba, Jam., P. R.

*eggersi* Hagedorn, 1904, p. 449

*bassivorus* Hopkins, 1915, p. 47

*moreirai* Eggers, 1928, p. 86

*distinctus* (Motschulsky), 1866, p. 401,  
 Jam., P. R.



- floridensis* Schedl, 1949a, p. 117  
*robustus* Eichhoff, 1878, p. 313, Cuba, P. R.  
*cylindricus* Schedl, 1949a, p. 116
- Dendrocranulus** Schedl, 1938, p. 165  
*carbonarius* (Ferrari), 1867, p. 41, Cuba, Jam.  
*floridensis* Hopkins, 1915, p. 43  
*anonae* Hopkins, 1915, p. 43  
*guatemalensis* (Hopkins), 1915, p. 44, Guadel.  
*parallelus* Schedl, 1938, p. 172
- Tribe **Crypturgini** LeConte
- Crypturgus** Erichson, 1836, p. 60  
*alutaceus* Schwarz, 1894a, p. 17, Cuba\*
- Tribe **Ipini** Bedel
- Acanthotomicus** Blandford, 1894a, p. 89  
*mimicus* (Schedl), 1961b, p. 227, Dom. Rep., Jam.
- Ips** DeGeer, 1775, p. 190.  
*avulsus* (Eichhoff), 1868, p. 402, Bah.  
*calligraphus* (Germar), 1824, p. 461, Bah., Cuba, Dom. Rep., Jam.  
*exesus* Say, 1826, p. 255  
*praemorosus* Eichhoff, 1868, p. 401  
*interstitialis* Eichhoff, 1869, p. 273  
*ponderosae* Swaine, 1925, p. 197  
*grandicollis* (Eichhoff), 1868a, p. 402, Bah., Cuba, Dom. Rep., Jam.  
*cacographus* LeConte, 1868, p. 162  
*cribricollis* Eichhoff, 1869, p. 273  
*chagnoni* Swaine, 1916, p. 186  
*cloudcrofti* Swaine, 1924, p. 70
- Tribe **Xyleborini** LeConte
- Ambrosiodmus** Hopkins, 1915, p. 55  
*devexus* (Wood), 1978, p. 398, P. R.  
*devexus* Wood, 1977, p. 219 (not Schedl, 1977), Dom. Rep., Dom.  
*klapperichi* n. sp.  
*lecontei* Hopkins, 1915, p. 56, Bah., Cuba, Dom. Rep., Jam., P. R.  
*gundlachi* Eggers, 1931a, p. 20  
*obliquus* (LeConte), 1878, p. 432, Dom. Rep., Guadel., P. R.  
*gilvipes* Blandford, 1898, p. 205  
*linderiae* Hopkins, 1915, p. 56  
*brasiliensis* Eggers, 1928, p. 96  
*mexicanus* Eggers, 1931a, p. 19  
*pseudobrasiliensis* Eggers, 1941, p. 101, new synonymy
- Dryocoetoides** Hopkins, 1915, p. 52  
*capucinus* (Eichhoff), 1869, p. 281, Dom. Rep., Guadel., Jam.  
*rufithorax* Eichhoff, 1869, p. 281  
*guatemalensis* Hopkins, 1915, p. 52  
*capucinoides* Eggers, 1941, p. 104
- Premnobius** Eichhoff, 1878, p. 404  
*cavipennis* Eichhoff, 1878, p. 404, Cuba, Jam., P. R.  
*xylocranellus* Schedl, 1931, p. 344  
*laticus* Eggers, 1933, p. 9
- Theoborus** Hopkins, 1915, p. 57  
*solitariceps* (Schedl), 1954, p. 45, Dom. Rep.  
*theobromae* Hopkins, 1915, p. 57, Dom., Dom. Rep., Guadel., St. Vinc. Is.  
*pseudococcotrypes* Eggers, 1941, p. 105  
*hirtellus* Schedl, 1949b, p. 271
- Xyleborinus** Reitter, 1913, p. 83  
*buscki* (Hopkins), 1915, p. 63, Dom.  
*gracilis* (Eichhoff), 1868b, p. 45, Guadel.  
*aspericauda* Eggers, 1941, p. 106, new synonymy  
*neogracilis* Schedl, 1954, p. 46, new synonymy  
*longulus* (Schedl), 1966, p. 117, new combination, Guadel.
- Xyleborus** Eichhoff, 1864, p. 37  
*affinis* Eichhoff, 1868a, p. 401, Widespr.  
*affinis* var. *parvus*, var. *mascarensis*, var.  
*fuscobrunneus* Eichhoff, 1878, p. 372  
*sacchari* Hopkins, 1915, p. 64  
*subaffinis* Eggers, 1933, p. 36  
*andrewesi* Blandford, 1896, p. 227, Jam.  
*insolitus* Bright, 1972, p. 77  
*beckeri* Bright, 1972, p. 84, Jam.  
*caraibicus* Eggers, 1941, p. 103, Dom., Guadel.  
*trinidadensis* Schedl, 1961a, p. 530  
*elevatus* Eggers, 1931a, p. 21, P. R.  
*ferrugineus* (Fabricius), 1801, p. 388, Widespr.  
*fuscatus* Eichhoff, 1868a, p. 400  
*impressus* Eichhoff, 1868a, p. 400  
*confusus* Eichhoff, 1868a, p. 401  
*retusicollis* Zimmermann, 1868, p. 146  
*bispinatus* Eichhoff, 1868b, p. 146  
*amplicollis* Eichhoff, 1869, p. 280  
*soltani* Hopkins, 1915, p. 66  
*nyssae* Hopkins, 1915, p. 66  
*argentinensis* Schedl, 1931, p. 345  
*schedli* Eggers, 1934, p. 83

- notatus* Eggers, 1941, p. 107  
*subitus* Schedl, 1949b, p. 280  
*howdenae* Bright, 1973, p. 18, Jam.  
*novus* Bright, 1972, p. 78 (not Eggers, 1923)  
*brighti* Schedl, 1974, p. 335  
*intrusus* Blandford, 1898, p. 213, Dom. Rep.\*  
*howardi* Hopkins, 1915, p. 65  
*fitchi* Hopkins, 1915, p. 66  
*scopulorum* Hopkins, 1915, p. 66  
*lepidus* Bright, 1972, p. 74, Jam.  
*macer* Blandford, 1898, p. 218, P. R.  
*novagranadensis* Eggers, 1941, p. 103, Guadel.  
*nuperus* Bright, 1972, p. 76, Jam.  
*posticus* Eichhoff, 1869, p. 281, Guadel.\*, P. R.\*  
*novateutonicus* Schedl, 1954, p. 47  
*pusio* Eggers, 1941, p. 105, Guadel.  
*scaber* Schedl 1949b, p. 273, Jam.  
*jamaicensis* Bright, 1972, p. 79  
*simulatus* Bright, 1972, p. 80, Jam., P. R.  
*spinulosus* Blandford, 1898, p. 201, Gren., Guadel., Dom. Rep., Haiti, Jam.  
*volvulus* (Fabricius) 1775, p. 454, Wi-despr.  
*torquatus* Eichhoff, 1868b, p. 146  
*alternans* Eichhoff, 1869, p. 280  
*badius* Eichhoff, 1869, p. 280  
*interstitialis* Eichhoff, 1878, p. 375  
*hubbardi* Hopkins, 1915, p. 65  
*schwarzi* Hopkins, 1915, p. 65  
*rileyi* Hopkins, 1915, p. 65  
*granadensis* Hopkins, 1915, p. 65  
*vagabundus* Schedl, 1949b, p. 277  
*xylographus* Say, 1826, p. 256, Cuba, Guadel.\*, P. R.\*  
*inermis* Eichhoff, 1868a, p. 401  
*canadensis* Swaine, 1917, p. 24  
**Xylosandrus** Reitter, 1913, p. 83  
*compactus* (Eichhoff), 1875, p. 201, Cuba, Virg. Is.  
*curtuloides* (Eggers), 1941, p. 102, Guadel.  
*morigerus* (Blandford), 1894b, p. 264, P. R.\*  

Tribe **Cryphalini** Lindemann

**Cryptocarenus** Eggers 1933, p. 10  
*heveae* (Hagedorn), 1912, p. 338, Cuba, Guadel., Virg. Is.  
*caraibicus* Eggers, 1937, p. 82  
*parvus* Blackman, 1943a, p. 36  
*porosus* Wood, 1954, p. 1014.  
*portoricensis* Schedl, 1951, p. 109, P. R.  
*seriatus* Eggers, 1933, p. 10, Cuba, Haiti, Jam., Virg. Is.  
*adustus* Eggers, 1933, p. 11  
*floridensis* Blackman, 1943a, p. 36  
*bolivianus* Eggers, 1943a, p. 356  
**Hypocryphalus** Hopkins, 1915, p. 41  
*mangiferae* (Stebbing), 1914, p. 542, Barb., Guadel.  
*mangiferae* Eggers, 1928, p. 85  
**Hypothenemus** Westwood, 1836, p. 34.  
*africanus* (Hopkins), 1915, p. 30, Jam., Virg. Is.  
*birmanus* (Eichhoff), 1878, p. 486, Cuba, Jam.  
*castaneus* Wood, 1954, p. 1027  
*brunneus* (Hopkins), 1915, p. 31, Guadel., Jam., P. R., Virg. Is.  
*frontalis* Hopkins, 1915, p. 31  
*cryphalomorphus* Schedl, 1939, p. 14  
*bituberculatus* Eggers, 1940, p. 126  
*ceibae* (Panzer), 1791, p. 35, Cuba, Gren., P. R.  
*columbi* Hopkins, 1915, p. 18, Bah. Is., Cuba  
*abdominalis* Hopkins, 1915, p. 18  
*rufopalliatu*s Hopkins, 1915, p. 18  
*brunneipennis* Hopkins, 1915, p. 18  
*amplipennis* Hopkins, 1915, p. 19  
*comosus* Bright, 1972, p. 50, Jam.  
*crudiae* (Panzer), 1791, p. 35, Cuba, Gren., P. R.  
*plumeriae* Nordlinger, 1856, p. 74  
*hispidulus* LeConte, 1868, p. 156  
*nanus* Hagedorn, 1909, p. 744  
*differens* Hopkins, 1915, p. 25  
*guatemalensis* Hopkins, 1915, p. 26  
*brasiliensis* Hopkins, 1915, p. 26  
*paraguayensis* Hopkins, 1915, p. 26  
*lecontei* Hopkins, 1915, p. 27  
*fallax* Costa Lima, 1924, p. 414  
*largipennis* Piza Junior, 1924, p. 354  
*cylindricus* Hopkins, 1915, p. 25, Guadel.  
*transatlanticus* Eggers, 1941, p. 99  
*guadeloupensis* Schedl, 1951, p. 98  
*depressa* Eichhoff, 1878, p. 155, W. Indies  
*erectus* LeConte, 1876, p. 356, Cuba, St. Thom.  
*validus* Blandford, 1904, p. 228  
*puncticollis* Hopkins, 1915, p. 32

- cubensis* Hopkins, 1915, p. 32  
*brunneicollis* Hopkins, 1915, p. 33  
*eruditus* (Westwood), 1836, p. 34, Wi-despr.  
*obscurus* Ferrari, 1867, p. 17  
*germari* Eichhoff, 1878, p. 159  
*myrmedon* Eichhoff, 1878, p. 160  
*schwarzi* Hopkins, 1915, p. 11  
*pruni* Hopkins, 1915, p. 16  
*rumseyi* Hopkins, 1915, p. 16  
*asiminae* Hopkins, 1915, p. 16  
*hamamelidis* Hopkins, 1915, p. 16  
*tenuis* Hopkins, 1915, p. 16  
*lineatifrons* Hopkins, 1915, p. 17  
*sacchari* Hopkins, 1915, p. 17  
*koebelei* Hopkins, 1915, p. 17  
*parvus* Hopkins, 1915, p. 17  
*flavipes* Hopkins, 1915, p. 18  
*punctifrons* Hopkins, 1915, p. 18  
*nigripennis* Hopkins, 1915, p. 19  
*ferrugineus* Hopkins, 1915, p. 20  
*heathi* Hopkins, 1915, p. 20  
*elongatus* Hopkins, 1915, p. 25  
*evonymi* Hopkins, 1915, p. 26  
*flavicollis* Hopkins, 1915, p. 24  
*pygmaeus* Hopkins, 1915, p. 24  
*subconcentralis* Hopkins, 1915, p. 25  
*unicolor* Hopkins, 1915, p. 25  
*juglandis* Blackman, 1922, p. 88  
*intersetosus* Eggers, 1928, p. 85  
*citri* Ebling, 1935, p. 21  
*dubiosus* Schedl, 1940b, p. 207  
*glabratus* (Schedl), 1957, p. 192, Jam.  
*gossypii* (Hopkins), 1915, p. 25, Cuba  
*beameri* Wood, 1954, p. 1056  
*hampei* (Ferrari), 1867, p. 11, Jam.  
*cofeicola* Campos Novaes, 1922, p. 67  
*interstitialis* (Hopkins), 1915, p. 28, Cuba, Jam.  
*interpunctus* Hopkins, 1915, p. 28  
*approximatus* Hopkins, 1915, p. 29  
*flavescens* Hopkins, 1915, p. 29  
*obliquus* Hopkins, 1915, p. 30  
*opacipennis* Hopkins, 1915, p. 30  
*quadridentatus* Hopkins, 1915, p. 30  
*javanus* (Eggers), 1908, p. 215, Cuba, Guadel.  
*obesus* Hopkins, 1915, p. 30  
*pistor* Schedl, 1951, p. 102  
*prosper* Schedl, 1951, p. 103  
*martiniquensis* (Eggers), 1941, p. 99, Mart.  
*obscurus* (Fabricius), 1801, p. 395, Dom. Rep., Guadel., Jam., P. R., Virg. Is.  
*cassiae* Eichhoff, 1878, p. 152  
*moschatae* Schauffuss, 1905, p. 8  
*rufescens* Hopkins, 1915, p. 29  
*buscki* Hopkins, 1915, p. 30  
*amazonicus* Eggers, 1934, p. 78  
*pilosus* Hopkins, 1915, p. 20, Cuba  
*pubescens* Hopkins, 1915, p. 19, P. R.  
*subelongatus* Hopkins, 1915, p. 19  
*opacifrons* Hopkins, 1915, p. 25  
*rotundicollis* (Eichhoff), 1878, p. 145, P. R., Virg. Is.  
*sculpturatus* Eichhoff, 1878, p. 146  
*quercus* Hopkins, 1915, p. 32  
*seriatus* (Eichhoff), 1872, p. 133, Barb., Cuba, P. R., Virg. Is.  
*pulverulentus* Eichhoff, 1872, p. 133  
*georgiae* Hopkins, 1915, p. 26  
*texanus* Hopkins, 1915, p. 26  
*minutus* Hopkins, 1915, p. 26  
*pini* Hopkins, 1915, p. 27  
*salicis* Hopkins, 1915, p. 27  
*floridensis* Hopkins, 1915, p. 27  
*fiebrigi* Hopkins, 1915, p. 27  
*ficus* Hopkins, 1915, p. 28  
*soltai* Hopkins, 1915, p. 28  
*lucusi* Hopkins, 1915, p. 27  
*virentis* Hopkins, 1915, p. 28  
*pecanis* Hopkins, 1915, p. 29  
*nitidipennis* Hopkins, 1915, p. 29  
*nitidulus* Hopkins, 1915, p. 29  
*subopacicollis* Hopkins, 1915, p. 30  
*niger* Hopkins, 1915, p. 31  
*robustus* Blackman, 1922, p. 88  
*andersoni* Wood, 1954, p. 1045  
*liquidambarae* Wood, 1954, p. 1046  
*setosus* (Eichhoff), 1868, p. 391, Guadel., Jam., P. R.  
*depressus* Eichhoff, 1878, p. 155  
*trinitatis* (Hopkins), 1915, p. 28, P. R.  
**Scolytogenes** Eichhoff, 1878, p. 475, 497  
*knabi* (Hopkins), 1915, p. 34, Cuba, Dom. Rep., Guadel., Jam., Tortola (BWI)  
*floridensis* Hopkins, 1915, p. 34  
*ritchiei* Sampson, 1918, p. 295  
*caribicus* Schedl, 1951, p. 96  
*minutissimus* Schedl, 1951, p. 97  
*subtriatus* Schedl, 1952, 360

Tribe **Corthylini** LeConte

Subtribe **Pityophthorina** Wood

**Araptus** Eichhoff, 1878, p. 305

*cubensis* (Blackman), 1942, p. 191, Cuba

- decorus (Bright), 1972, p. 96, Jam.  
 denticulatus (Eggers), 1940, p. 129, Guadel.  
 hymenaeae (Eggers), 1933, p. 9, Guadel., Jam., St. Lucia\*, St. Vinc.  
*insularis* Eggers, 1940, p. 128  
*caribaeus* Blackman, 1942, p. 185  
*guianae* Blackman, 1942, p. 187  
*humilis* Blackman, 1942, p. 188  
 laevigatus (Eggers), 1933, p. 6, Guadel.  
*guadeloupensis* Schedl, 1951, p. 73  
 laevis (Schedl), 1938a, p. 181, Guadel.  
 montanus (Bright), 1972, p. 93, Jam.  
 niger (Bright), 1972, p. 93, Jam.  
 pallidus (Blackman), 1942, p. 193, Cuba, Dom. Rep., P. R.  
*portoricensis* Schedl, 1951, p. 109  
*devius* Schedl, 1972, p. 61  
 politus (Blandford), 1904, p. 244, Cuba, Haiti, Jam.  
*mexicanus* Eggers, 1936, p. 391  
*hubbardi* Blackman, 1942, p. 182
- Pityophthorus** Eichhoff, 1864, p. 39  
 abnormalis Bright, 1972, p. 88, Jam.  
 antillicus Bright, 1981b, p. 162, Dom. Rep.  
 concentrallis Eichhoff, 1878, p. 188, Man O'War Cay\*, Bah. Is., Cuba  
*lateralis* Swaine, 1917, p. 27  
 confractus Bright, n. sp., Jam.  
 diversus Bright, 1972, p. 87, Jam.  
 exquisitus (Blackman), 1942, p. 196, Virg. Is.\*  
 formosus Bright, 1972, p. 88, Jam.  
 guadeloupensis Nunberg, 1956, p. 208, Guadel.  
*eggersianus* Schedl, 1958, p. 144  
 hispaniolus Bright, n. sp., Dom. Rep.  
 pinavorus Bright, n. sp., Dom. Rep.  
 pudens (Blackman), 1942, p. 199, Cuba, Dom. Rep., Virg. Is.  
 pulicarius Zimmermann, 1868, p. 144, Cuba  
*cubensis* Schedl, 1972, p. 65  
 punctatus Eggers, 1940, p. 130, Guadel.  
 regularis Blackman, 1942, p. 206, Cuba  
 subconcentralis Schedl, 1938c, p. 183, Guadel.  
 suspiciosus Bright, 1972, p. 89, Jam.
- Subtribe **Corthylina** Wood
- Brachydendrulus** Schedl, 1951, p. 114  
 guadeloupensis Schedl, 1970, p. 91, Guadel.
- Corthylus** Erichson, 1836, p. 64  
 curiosus Bright, 1972, p. 104, Jam.  
 luridus Blandford, 1904, p. 256, Guadel.  
*biseriatus* Eggers, 1943b, p. 247  
 pisinnus Bright, 1972, p. 103, Jam.  
 spinifer Schwarz, 1891, p. 114, Cuba, Gren.\*  
*affinis* Fonseca, 1925, p. 3  
*guayanensis* Eggers, 1933, p. 22  
*tomentosus* Schedl, 1940a, p. 350  
 subasperatus Eggers, 1940, p. 141, Dom., Guadel.  
 tuberculatus Eggers, 1940, p. 140, Dom., Guadel.
- Gnathotrachus** Eichhoff, 1869, p. 275  
 materiarius (Fitch), 1858, p. 726, Dom. Rep.
- Microcorthylus** Ferrari, 1867, p. 58  
 brevis Eggers, 1935, p. 155, Guadel.  
 glabratus (Ferrari), 1867, p. 54, Guadel. (?)  
 minimus Schedl, 1950, p. 160, Cuba, Jam.  
*minutissimus* Schedl, 1952, p. 361
- Monarthrum** Kirsch, 1866, p. 213  
 bifoveatum Wood, 1974, p. 137 (ident.?), Dom. Rep.\*  
 brittoni Schedl, 1970, p. 101, Jam.  
 denticulatum Wood, 1981, p. 122, Guadel.  
*dentatum* Eggers, 1941, p. 101 (not Eggers, 1931)  
 mali (Fitch), 1855, p. 326, Cuba  
*longulum* Eichhoff, 1869, p. 278  
 omissus Schedl, 1952, p. 347, P. R.  
*opacifrons* Schedl, 1950, p. 167  
 praeustum (Eggers), 1941, p. 100, Dom.\*, Guadel., P. R.
- Tricolus** Blandford, 1904, p. 286  
 gracilis Eggers, 1937, p. 87, Guadel.  
 perdiligens Schedl, 1950, p. 171, Dom. Rep.\*, Jam.  
*ignotus* Bright, 1972, p. 99  
 unidentatus Bright, 1972, p. 98, Jam.

## Taxonomic Notes

**Ambrosiodmus obliquus** (LeConte)

*Pityophthorus obliquus* LeConte, 1878, p. 432.

*Xyleborus pseudobrasiliensis* Eggers, 1941, p. 101, **new syn.**

The holotype of *X. pseudobrasiliensis* in the Natural History Museum in Vienna was examined and found to represent the widespread species *A. obliquus*. Other specimens identified by Eggers were compared to specimens previously compared to LeConte's type of *P. obliquus* and found to be conspecific.

**Chramesus opacicollis** Eggers

*Chramesus opacicollis* Eggers, 1940, p. 124

*Chramesus brevisetosus* Bright, 1972, p. 40, **new syn.**

The holotype of *Chramesus brevisetosus* was compared to a cotype of *C. opacicollis* in the United States National Museum of Natural History. Although the two specimens show some differences such as the larger stria punctures of *C. brevisetosus*, the similar vestiture, body proportions and major morphological features indicate that the two represent the same species.

**Phloeotribus setulosus** Eichhoff

*Phloeotribus setulosus* Eichhoff, 1868b, p. 149.

*Phloeotribus atlanticus* Schedl, 1951, p. 81, **new syn.**

The holotype of *Phloeotribus atlanticus* in the Natural History Museum in Vienna was examined and found to represent the common, widely distributed *P. setulosus*.

**Xyleborinus gracilis** (Eichhoff)

*Xyleborus gracilis* Eichhoff, 1868b, p. 45

*Xyleborus aspericauda* Eggers, 1941, p. 106, **new syn.**

*Xyleborus neogracilis* Schedl, 1954, p. 46, **new syn.**

The holotype of *X. neogracilis* in the Natural History Museum in Vienna was compared to two specimens of *X. aspericauda* identified by Eggers in the same collection. Both represented the same species. Specimens compared to the above were further compared to the lectotype of *X. gracilis* in the United States National Museum of Natural History and all were found to represent the same species.

**Xyleborinus longulus** (Schedl), **New Comb.**

*Xyleborus longulus* Schedl, 1966, p. 117.

The holotype of this species in the Natural History Museum in Vienna was examined and found to have a conical scutellum, a major diagnostic feature of the genus *Xyleborinus*.



## New Species

**Ambrosiodmus klapperichi** n. sp.

Length 2.1–2.3 mm, 2.4 times longer than wide.

Female. – Frons convex, weakly, transversely impressed above epistoma with a very weak median elevation at level of upper margin of eye; surface shining, finely minutely reticulate, with scattered shallow punctures, each of which bears a long, fine, erect seta. Antennal club rather large, about as long as wide, basal segment occupying about one-third of total club length; sutures weakly arcuate, bordered by row of short setae; posterior face with two weak arcuate sutures. Pronotum very slightly longer than wide, widest at middle; sides arcuate from base to broadly rounded anterior margin; anterior margin with numerous serrations; anterior slope with numerous, erect, acute asperities, these becoming progressively smaller over posterior portion to base; surface between asperities on posterior portion smooth, shining, with minute, impressed points. Elytra 1.3 times longer than wide; sides parallel for almost entire length, apex very broadly rounded, almost truncate; striae punctured in regular rows, punctures large, close, deeply impressed, each bearing a very short seta, stria 1 slightly more deeply impressed than others; interstriae about as wide or only very slightly wider than striae, weakly convex, with a median row of punctures, these slightly smaller, slightly less deeply impressed than those in striae, somewhat confusedly placed in interstriae 1–3, each puncture bearing a long, erect seta. Declivity basically convex, very steep, upper portions of interstriae 3–5 somewhat inflated, higher, than interstriae 1; interstriae 1 weakly but distinctly elevated, bearing a median row of distinct granules; interstriae 2 distinctly impressed, devoid of granules; interstriae 3–5 each bearing a median row of granules, these slightly larger than those on interstriae 1; interstriae 6 with smaller granules; interstriae 7 acutely elevated to elytral apex, ridge smooth.

Male. – Unknown.

Type material. – The holotype (♀) is labelled “Colonia, 1000 m, 1954”/“Rep. Dominic., 195, J. & S. Klapperich”/“Holotype *Ambrosiodmus klapperichi* D. E. Bright 1985.” Two paratypes bear the same date except the date on the upper label is “12.2”. One paratype bears the data “Cazabita, 1250 m, 23.12”/same second label as holotype. One paratype is labelled: “Dominica, Clarke Hall, XII-1-6-1964, P. J. Spangler”/“Bredin-Archbold-Smithsonian Bio. Surv. Dominica”. All paratypes have the appropriate type label.

The holotype and one paratype are in the Natural History Museum, Basel, Switzerland, one paratype is in the United States Museum of Natural History, Washington, D. C. and two paratypes (CNC No. 18327) are in the Canadian National Collection of Insects, Ottawa, Ontario.

Remarks. – This species is very similar to *A. obliquus* (LeConte) but the differences seen and summarized below seem to warrant its segregation as a distinct species. When compared with specimens of *A. obliquus*, *klapperichi* has the second declivital interstriae more deeply impressed with no trace of a median row of granules, the granules on inter-

striae 1, 3, 4 and 5 are distinct and considerably larger, the strial punctures on the disc are larger and more deeply impressed, making the interstriae narrower and weakly convex and the size is slightly smaller.

This species would key out in Wood's (1982) key to the species of *Xyleborus* to couplet 24 (p. 781). Couplet 24 should be modified as follows:

- 24 (23). Interstriae 1 and 3 on declivity with a median row of large granules; interstriae 2 distinctly impressed on declivity and devoid of granules; discal interstriae about as wide or only slightly wider than striae; Dominican Republic, Dominica; 2.1–2.3 mm . . . . . **klapperichi** Bright
- Interstriae 1, 2, 3 on declivity either all with granules or declivital granules absent; interstriae 2 either not impressed or only very weakly so; discal interstriae at least twice as wide as striae . . . . . 24 a
- 24 a Larger; interstriae 1 on declivity feebly elevated, usually as high as 3, 2 feebly sulcate, its granules as large as those on 1; discal interstriae about three to four times as wide as striae, punctures often granulate; color reddish-brown to black . . . . . **obliquus** (LeConte)
- As in second half of couplet.

### ***Bothrosternus isolatus* Bright**

The original description of this species (Bright, 1972, p. 28) refers to the male only. The female is described below.

Female. – Length 2.6 mm, 2.1 times longer than wide; dark reddish-brown. Frons transversely flattened above epistoma to level of eye emargination, surface of flattened area densely punctate-granulate with a prominent, transverse, beaded elevation occupying median three-fourths slightly above level of antennal insertion, flattened area with long, abundant setae extending along sides of eyes nearly to upper eye level; median two-thirds from impressed area to vertex strongly convex, glabrous, shining, marked with extremely fine, close, transverse lines; area above eye level dull, weakly punctured, rugose-reticulate. Pronotum and elytra as described for male.

Described from two females from: Dominica: 1.6 mi. W. of Pont Casse, IV. 28. 1964, O. S. Flint, Jr. (CNC) and Clarke Hall, 21.–31. Jan. 1965, W. W. Wirth, light trap (USNM).

I have examined specimens (co-types) of *B. brevis* Eggers, from Bolivia, Brazil and Venezuela, and have noted in my notes that they are very near to specimens of *B. isolatus*. My species is probably a synonym of Eggers species but specimens of *B. brevis* are not presently available for re-examination. I will leave *B. isolatus* as a valid name until re-comparison can be made.

### ***Pityophthorus confractus* n. sp.**

Length 1.6–1.8 mm, about 2.8 times longer than wide.

Female. – Frons very weakly, transversely concave or transversely flattened from epistoma to just below upper eye level, median carina very weakly elevated, extending across concavity or reduced to very short line just above epistoma or absent, vertex more strongly convex with a weakly elevated, longitudinal callus; surface distinctly to obscurely punctured, punctures fine, sparser and finer on vertex with interpuncture space minutely reticulate. Antennal club narrowly oval, 1.2 times longer than wide, widest at middle; first two sutures transverse; first two segments occupy about half of total club length. Pronotum 1.1 times longer than wide, widest at a point midway between summit and base; sides weakly arcuate, anterior constriction weak; asperities on anterior slope arranged into three, regular, concentric rows, with several additional, broken, indistinct rows at summit; posterior area of disc smooth, densely punctured, punctures distinct, deep, separated by distance less than their diameters, interpuncture space shining, with numerous, very fine points; median line broad, not elevated, devoid of large punctures. Elytra 1.9 times longer than wide; apex broadly rounded; discal striae punctured in regular rows, punctures large, distinctly impressed, almost touching; discal interstriae about as wide as striae, surface smooth, shining, essentially impunctate but occasionally with one or two punctures, these bearing a fine, erect seta. Declivity convex; interstriae 1 shallowly impressed below level of 3, shining, devoid of granules but with a median row of fine, erect setae; interstriae 2 shallowly impressed, as wide as discal width, surface shining, devoid of setae or granules; interstriae 3 not elevated, bearing a row of large deep punctures and a row of fine, erect setae, these longer than those on interstriae 1; remaining interstriae with a median row or fine, erect setae; striae 1 narrowly impressed, punctures much smaller than those on disc; striae 2 and 3 with large, deep punctures, equal in size and depth to those on disc; remaining striae also with deep, distinct punctures.

Male. – Virtually identical to female.

Type material. – The holotype (♀) is labelled: "Jamaica: Portland between Hardwar Gap and Green Hills, 1100 m, 21.VIII.1980, A. Norrbom"/"under bark of fallen tree"/HOLOTYPE *Pityophthoru confractus*. D. E. Bright, 1985. The allotype and 24 paratypes bear the same date with appropriate type labels.

The holotype, allotype and 12 paratypes have been returned to the Carnegie Museum of Natural History, Pittsburgh, Pennsylvania. The remaining paratypes are in the Canadian National Collection of Insects, Ottawa (CNC No. 18328).

Comments. – This species is most closely related to *P. lautus* Eichhoff and will key to couplet 6 in my key to the species in the Lautus group (Bright, 1981a).

Couplet 6 should be modified as follows:

6. Punctures of declivital striae (except 1) large, deep, very distinct; declivital interstriae 1 and 3 devoid of granules; frons usually densely, deeply punctured . . . . . **confractus** Bright
- Punctures of declivital striae small, usually obsolete, at least smaller than those on disc; declivital interstriae 1 and 3 usually with median row of fine granules; frons obscurely punctured . . . . .

6 a. Continue as in couplet 6.

The above comparisons should be sufficient to distinguish adults of *P. confractus* from those of *P. lautus*.

***Pityophthrus hispaniolus* n. sp.**

Length 1.6–1.8 mm, 3.0 times longer than wide.

Female. – Frons convex, very slightly flattened, distinctly, moderately strongly punctured with a very weak longitudinal carina extending from epistoma to vertex, interrupted across flattened, punctured lower surface at level just below upper margin of eyes; surface dull, minutely reticulate on vertex, shining with small, shallow punctures on lower half, impunctate above upper level of eyes. Antennal club large, about 1.4 times longer than wide, widest through segment 2; suture 1 weakly arcuate, 2 nearly straight; segments 1 and 2 together occupy more than half of total club length. Pronotum slightly more than 1.1 times longer than wide, widest on posterior half; asperities on anterior slope arranged into three irregular concentric rows, these more evenly concentric on lateral areas, those in second row may be somewhat irregular in median area; posterior area of disc smooth, dull, punctures of moderate size, moderately impressed; surface between punctures densely, minutely reticulate. Elytra 1.8 times longer than wide, apex broadly rounded; discal striae punctured in regular rows, punctures shallowly impressed; discal interstriae about 1.5–2.0 times wider than striae, smooth, shining, with scattered points and lines. Declivity steep; interstriae 1 and 3 elevated, 3 higher on upper portions than 1, both with a row of very fine granules; interstriae 2 slightly impressed, flat, surface with numerous fine points; striae 1 and 2 distinct, 2 less than 1, both with indistinct but visible punctures.

Male. – Not recognized in material at hand.

Type material. – The holotype (♀) is labelled: “Colonia, 1000 m, 21.4”/“Rep. Dominic. 1972, J. & S. Klapperich”/“HOLOTYPE *Pityophthorus hispaniolus* D. E. Bright, 1985”. Three paratypes bear the same date except on two specimens the date is “21.1” and on one specimen it is “30.1”.

The holotype and one paratype are in the Natural History Museum in Basel, Switzerland; two paratypes are in the Canadian National Collection of Insects, Ottawa (CNC No. 18325).

Comments. – This species is very closely related to *P. paulus* Wood and will key to couplet 8 in my key to the species in the Lautus group (Bright, 1981a).

Couplet 8 should be modified as follows:

- |     |   |                           |    |
|-----|---|---------------------------|----|
| 8.  | .....   | <b>morosus</b> Wood       |    |
| –   | Frons with longitudinal elevation interrupted in middle by a weak, transverse, punctured impression; discal interstriae with numerous fine lines and/or points, surface irregular ..... |                           | 8a |
| 8a. | Granules on declivital interstriae 1 and 3 distinct, moderately large; frons dull, reticulate, sparsely punctured; Mexico .....   | <b>paulus</b> Wood        |    |
| –   | Granules on declivital interstriae 1 and 3 minute, barely visible; frons shining, smooth, rather densely, shallowly punctured; Dominican Rep. .   | <b>hispaniolus</b> Bright |    |

***Pityophthorus pinavorus* n. sp.**

Length 1.2–1.4 mm, 2.5 times longer than wide.

Female. Frons flattened to very weakly convex, usually with a very weak, median, epistomal elevation and an extremely faint longitudinal carina or carina absent; surface shining, very finely punctured except along longitudinal median line; vestiture sparse, inconspicuous, consisting of short, yellowish setae, these denser along epistoma. Antennal club oval, about 1.1 times longer than wide, widest through segments 2 and 3; sutures 1 and 2 weakly arcuate; first two segments occupy more than half of total club length. Pronotum 1.1 times longer than wide, widest at a point just behind dorsal summit; sides weakly arcuate, anterior constriction weak; asperities on anterior slope small, randomly placed; summit prominent; posterior area of disc with large, distinct punctures, these separated by a distance less than their own diameters; surface between punctures minutely reticulate. Elytra about 1.7 times longer than wide; apex very narrowly rounded; discal striae punctured in nearly regular rows, punctures large, about equal in size and depth as those on posterior portion of pronotum; discal interstriae narrower than striae, smooth. Declivity evenly convex; interstriae 1 weakly elevated, devoid of granules; interstriae 2 as wide as on disc, not impressed; interstriae 3 as on disc, with a few, very fine, obscure punctures; striae 1; very weakly, narrowly impressed, punctures very slightly smaller than those on disc; striae 2, 3 and those remaining not impressed, with punctures equal to those on disc.

Male. – Almost indistinguishable from female, except longitudinal carina on frons slightly more evident, but still extremely weak.

Type Material. – The holotype (♀) is labelled “FLA.: Highlands Co., Lake Placid, 3 mi. E. Archbold Biol. Sta., 28 Aug. 1982, M. Deyrup”/“*Pinus elliotti* twig attached to tree”/“♀”/“Holotype *Pityophthorus pinivorus* D. E. Bright, 1985, CNC No. 18329”. The allotype and 32 paratypes bear the same date except dates as follows: 1 April 1982 (1), 7 April 1982 (1), 1 June 1982 (2), 28 August 1982 (1), 3 October 1982 (3), 8 October 1982 (4), 11 October 1982 (3), 18 October 1982 (17). Some of the paratypes above have a label “*Pinus elliotti* ‘flag’ on live tree”. Three additional paratypes are labelled: Hopk. U. S. 32062A-1/Jarabacoa, R. D. [Dominican Republic], VI. 15.46/*Pinus occidentalis* D. Deleon, Colr.

The holotype, allotype and 15 paratypes are in the Canadian National Collection, Ottawa, 2 are in the S. L. Wood collection, Provo, Utah, 3 are in the United States Museum of Natural History, Washington, D. C. and the remainder have been returned to Dr. M. Deyrup, Archbold Biological Station, Lake Placid, Florida.

Remarks. – This species appears to be unique among North American *Pityophthorus* and does not fit into any of the species groups I proposed in my 1981 monograph. In the key to species groups in the above mentioned work (pp. 22–28), this species will key to complete 42. The key should then be modified as follows:

- 42a Elytral striae distinctly punctured in even rows, punctures large, deep; elytral declivity evenly convex, apex narrowly rounded; male and female frons nearly identical . . . . . *Pinavorus* Group



Elytral striae vaguely punctured in even rows, punctures obscure; elytral declivity weakly sulcate (convex in *P. minus*), apex broadly rounded; male and female frons dimorphic . . . . . 42b

42b (couplet 42).

Adults of *P. pinavorus* are most easily recognized by the very evenly convex elytral declivity on which the striae are punctured in regular rows, by the distinctly punctured discal striae, by the impunctate elytral interstriae and by the very narrowly rounded elytral apex.

### Literature cited

- Beeson, C. F. C. 1929. Platypodidae and Scolytidae. Insects of Samoa and other Samoan terrestrial arthropods. Part IV. Coleoptera 4: 217–248.
- Blackman, M. W. 1920. North American Ipidae of the subfamily Micracinae, with descriptions of new species and genera. – Miss. agric. Expt. Sta. Tech. Bull. 9: 1–62.
- Blackman, M. W. 1922. Mississippi bark beetles. – Miss. agric. Expt. Sta. Tech. Bull. 11: 1–130.
- Blackman, M. W. 1928. Notes on Micracini with descriptions of twelve new species. – New York State Coll. For., Tech. Pub. 25: 185–208.
- Blackman, M. W. 1940. The scolytid beetles of the genus *Renocis* Casey, with descriptions of nine new species. – Proc. U. S. natn. Mus. 88: 373–401.
- Blackman, M. W. 1942. New species of bark beetles (Pityophthorini) from Mexico and tropical America (Coleoptera, Scolytidae). – Proc. U. S. natn. Mus. 92: 177–228.
- Blackman, M. W. 1943a. New genera and species of neotropical bark beetles (Coleoptera: Scolytidae). – J. Wash. Acad. Sci. 33: 34–38.
- Blackman, M. W. 1943b. New species of American Scolytid beetles, mostly neotropical. – Proc. U. S. natn. Mus. 94: 371–399.
- Blackmann, M. W. 1943c. New genera and species of bark beetles of the subfamily Micracinae (Scolytidae, Coleoptera). – Proc. U. S. natn. Mus. 93: 341–365.
- Blanchard, E. 1846. *Phloeotrupes caelatus* n. sp. In Brulle, A. Insects du Voyage de d'Orbigny dans l'amérique meridionale. Paris.
- Blandford, W. F. H. 1894a. IV. The Rhynchophorus Coleoptera of Japan. Part III. Scolytidae. – Trans. ent. Soc. London. 1894: 53–141.
- Blandford, W. F. H. 1894b. Notes on Scolytidae and their food plants. – Insect life 6: 260–265.
- Blandford, W. F. H. 1896. Descriptions of new Scolytidae from the Indo-Malayan and Austro-Malayan regions. – Trans. R. ent. Soc. Lond. 1896, pp. 191–228.
- Blandford, W. F. H. 1896–1905. Family Scolytidae. Biol. Centr. Amer: Insecta, Coleoptera 4 (6): 97–144 (1896), 145–184 (1897), 185–224 (1898), 225–280 (1904), 281–298 (1905).
- Bright, D. E. 1972. The Scolytidae and Platypodidae of Jamaica (Coleoptera). – Bull. Inst. Jamaica Sci. Ser. 21, 108 pp.
- Bright, D. E. 1973. *Xyleborus howdenae*, new name and some corrections to “The Scolytidae and Platypodidae of Jamaica.” – Coleopts Bull. 27 (1): 18.
- Bright, D. E. 1981a. Taxonomic monograph of the genus *Pityophthorus* Eichhoff in North and Central America (Coleoptera: Scolytidae). – Mem. ent. Soc. Canada 118: 378 pp.
- Bright, D. E. 1981b. Studies on West Indian Scolytidae (Coleoptera). I. New species, new distribution records and taxonomic notes. – Stud. Neotrop. Fauna and Environ. 16: 151–164.
- Bright, D. E. 1982. Studies on West Indian Scolytidae (Coleoptera) 2. New distribution records and descriptions of a new genus and species. – Stud. Neotrop. Fauna and Environ. 17: 163–168.
- Bruck, C. R. 1931. Two new species of bark beetles of the genus *Phloeosinus* Chapuis. – Pan-Pacif. Ent. 7: 126–128.

- Campos Novaes, J. de. 1922. Um broqueador do cafeeiro, *Xyleborus coffeicola* n. sp. Fam. Ipidae. Bol. Agric. Sao Paulo 23: 67–70.
- Chapuis, F. 1869. Synopsis des scolytides (prodrome d'un travail monographique). Liège. 61 pp. (Preprint of Mem. Soc. Roy. Liège, ser. 2, 3: 213–269, 1873).
- Costa Lima, A. M. da. 1924. Sobre a broca do cafe (*Stephanoderes coffeae* Haged.). – Chacaras e Quintaes 30: 316–319, 413–416.
- De Geer, C. 1775. Memoires pour servir à l'histoire des insectes. Stockholm Vol. 5, 448 pp., 16 pls.
- Ebling, W. 1935. A new scolytid beetle found in the bark of lemon trees. – Pan-Pacif. Ent. 11: 21–23.
- Eggers, H. 1908. Fünf neue Borkenkäfer. – Ent. Bl. Biol. Syst. Käfer 4: 214–217.
- Eggers, H. 1928. Ipidae (Coleoptera) da America do Sol. – Archos Inst. biol. Def. agric. anim., S. Paulo 1: 83–99.
- Eggers, H. 1931a. Borkenkäfer (Ipidae, Col.) aus Südamerika, III. – Ent. Bl. Biol. Syst. Käfer 27: 14–23.
- Eggers, H. 1931b. Borkenkäfer (Ipidae, Col.) aus Südamerika, III. – Ent. Bl. Biol. Syst. Käfer 26: 163–171.
- Eggers, H. 1932. Borkenkäfer aus Südamerika N. Die Gattung *Problechilus* Eichh. mit 8 neuen Arten. – Wien. ent. Z. 49: 226–235.
- Eggers, H. 1933. Borkenkäfer (Ipidae, Col.) aus Südamerika. VI. Material des Museum Paris aus Franz Guayana und Venezuela. – Trav. Lab. Ent. Mus. Nat. Hist. Natur., Orig. Mem. 1: 1–37.
- Eggers, H. 1934. Borkenkäfer (Ipidae, Col.) aus Südamerika, VII. – Ent. Bl. Biol. Syst. Käfer 30: 78–84.
- Eggers, H. 1935. Borkenkäfer aus Südamerika (Ipidae, Col.) (Fortsetzung). VII. Vergessene und neue Gattungen (1. Teil). – Revta Ent., Rio de J. 5: 153–159.
- Eggers, H. 1936. Borkenkäfer aus Südamerika (Ipidae, Col.). VIII. Vergessene und neue Gattungen (2. Teil). – Revta Ent., Rio de J. 6: 388–394.
- Eggers, H. 1937. Borkenkäfer aus Südamerika (Ipidae, Col.). VIII. Vergessene und neue Gattungen (2. Teil, Schluß). – Revta Ent., Rio de J. 7: 79–88.
- Eggers, H. 1940. Borkenkäfer aus Südamerika (Coleoptera: Ipidae), IX. Insel Guadeloupe. – Arb. morphol. taxon. Ent. Berl. 7: 123–141.
- Eggers, H. 1941. Neue Borkenkäfer aus Südamerika (Coleoptera: Ipidae). – Arb. morph. taxon. Ent. Ber. 8: 99–109.
- Eggers, H. 1943a. Borkenkäfer (Col., Ipidae) aus Südamerika, X. Bolivia. – Mitt. Münchener ent. Ges. 33: 344–389.
- Eggers, H. 1943b. Neue Borkenkäfer aus dem Deutschen Entomologischen Institut. – Arb. morphol. taxon. Ent. Berl. 10: 241–248.
- Eggers, H. 1951. Borkenkäfer (Ipidae, Col.) aus Südamerika. XII. 25 neue Arten aus verschiedenen Gebieten. – Ent. Bl. Biol. Syst. Käfer 45–46: 144–154.
- Eichhoff, W. 1864. Über die Mundteile und die Fühlerbildung der europäischen Xylophagi sens. strict. – Berl. ent. Z. 8: 17–46.
- Eichhoff, W. 1868a. Neue amerikanische Borkenkäfer – Gattungen und Arten. – Berl. ent. Z. 11: 399–402.
- Eichhoff, W. 1868b. Neue amerikanische Borkenkäfer – Gattungen und Arten. – Berliner Ent. Z. 12: 145–152.
- Eichhoff, W. 1869. Neue Borkenkäfer. – Berl. ent. Z. 12: 273–282.
- Eichhoff, W. 1872. Neue exotische Tomiciden-Arten. – Berl. ent. Z. 15: 131–136.
- Eichhoff, W. 1875. Sous-Tribu X. Tomicides. In F. Chapuis and W. J. Eichhoff, *Scolytides recurillis* au Japon par M. C. Lewis. – Annls. Soc. ent. Belg. 18: 195–204.
- Eichhoff, W. 1878. Ratio, descriptio, emendatio eorum Tomicinorum... Preprint of Mem. Soc. Roy. Sci. Liège, ser. 2, 8: 1–531.
- Erichson, W. F. 1836. Systematische Auseinandersetzung der Familie der Borkenkäfer (Bostrichidae). – Arch. Naturgesch. 2: 45–65.

- Fabricius, J. C. 1775. *Systema entomologiae*. Lipsiae. 832 p.
- Fabricius, J. C. 1801. *Systema eleutheratorum*. Kiliae. Vol. 1 506 pp., Vol. 2, 687 pp.
- Ferrari, J. A. 1867. Die forst- und baumzuchtschädlichen Borkenkäfer... Wien. 96 pp.
- Fitch, A. 1855. Report on the noxious, beneficial and other Insects of the State of New York. – Trans. N. Y. St. agric. Soc. 14: 315–490.
- Fitch, A. 1858. Fourth report on the noxious, beneficial and other insects of the State of New York. – Trans. N. Y. St. agric. Soc. 17: 687–814.
- Fonseca, J. P. de. 1925. De um novo parasita do cafeeiro *Metacorthylus affinis* n. sp. – Publ. Comm. Est. Deb. Prag. Caf. 12: 1–8.
- Geoffroy, E. L. 1762. *Histoire abrégée des insectes qui se trouvent aux environs de Paris, dans laquelle ces animaux sont rangés suivant un ordre méthodique*. Paris, dans laquelle ces animaux sont rangés suivant un ordre méthodique. Paris. Vol. 1, 523 pp., Vol. 2, 690 pp.
- Germar, E. F. 1824. *Insectorum species novae aut minus cognitae, descriptionibus illustratae*. Ha-lae. 624 pp.
- Hagedorn, H. 1904. Steinnußbohrer. – Allg. Z. Ent. 9: 447–452.
- Hagedorn, J. M. 1909. Diagnosen bisher unbeschriebener Borkenkäfer. II. Serie. – D. ent. Z. 1909: 733–746.
- Hagedorn, J. M. 1912. Borkenkäfer (Ipidae) welche in Kautschukbäumen leben. – Revue. Zool. afr. 1: 336–346.
- Hopkins, A. D. 1915. Classification of the Cryphalinae, with descriptions of new genera and species. – U. S. Dept. Agric. Rept. 99. 75 pp.
- Hornung, E. G. 1842. Über einige in den Betelnüssen vorkommende Käfer. – Stetti ent. Ztg. 3: 115–117.
- Kirsch, T. F. W. 1866. Beiträge zur Käferfauna von Bogota. – Berl. ent. Z. 10: 173–216.
- Latreille, P. A. 1804. Familien, Gattungen und Horden der Käfer, Coleoptera. – In Illiger Mag. Insektenk. 3: 1–138.
- LeConte, J. L. 1868. Notes and appendix. In C. Zimmermann, Synopsis of the Scolytidae of America north of Mexico. – Trans. Am. ent. Soc. 2: 141–178.
- LeConte, J. L. 1876. Family IX. Scolytidae. In J. L. LeConte and G. H. Horn. The Rhynchophora of America north of Mexico. – Proc. Am. phil. Soc. 15 (96): 1–455.
- LeConte, J. L. 1878. Additional descriptions of new species. In E. A. Schwarz, The Coleoptera of Florida. – Proc. Am. phil. Soc. 17: 353–472.
- Motschulsky, V. v. 1866. Essai d'un catalogue des insectes de l'île de Ceylan. – Moskov. Obshch. Isp. Prirody Otd. Biol. Biul. (Bull. Soc. Imp. Nat. Moscou) 39: 393–446.
- Nordlinger, H. 1856. Nachträge zu Ratzeburgs Forstinsekten. Stuttgart. 83 pp.
- Nunberg, M. 1956. Namensänderungen und Synonymie einiger Borkenkäfer (Coleoptera, Scolytidae). – Ann. Zool. 16: 207–214.
- Panzer, G. W. F. 1791. Beschreibung eines sehr kleinen Kapuskäfers. – Naturforscher 25: 35–38.
- Piza Junior, S. de T. 1924. Uma nova especie de ipidio do genero *Stephanoderes*. – Rev. Soc. Rur. Brasileira 5: 354–355.
- Reitter, E. 1913. Bestimmungs-Tabelle der Borkenkäfer (Scolytidae) aus Europa und den angrenzenden Ländern. – Wien. ent. Ztg. 32 (Beiheft): 1–116.
- Sampson, F. W. 1918. A new scolytid injurious to dried sweet potatoes in Jamaica. – Bull. ent. Res. 8: 295.
- Say, T. 1826. Descriptions of new species of coleopterous insects inhabiting the United States. – J. Acad. nat. Sci. Philad. 5: 237–284.
- Schaufuß, C. F. C. 1905. Borkenkäferstudien. – Insektenbörse 22: 8.
- Schedl, K. E. 1931. Notes on the genus *Xyleborus* Eichh. – Ann. Mag. nat. Hist. (10) 8: 339–347.
- Schedl, K. E. 1934. Neue Scolytidae und Platypodidae aus Zentral- und Südamerika. – Ent. Bl. Biol. Syst. Käfer 30: 208–212.
- Schedl, K. E. 1936. Scolytidae und Platypodidae (Coleopt.) – Neue zentral- und südamerikanische Arten (36. Beitrag). – Archiv. Inst. Biol. Veget. 3: 99–110.
- Schedl, K. E. 1937. New Scolytidae and Platypodidae (Coleoptera). – Proc. R. ent. Soc. Lond. (B) 6: 13–15.

- Schedl, K. E. 1938a. Die Einteilung der Pityophthorinae. – Arch. Naturgesch., N. F., 7: 157–188.
- Schedl, K. E. 1938b. Scolytidae und Platypodidae. 48. Beitrag. Die Gattungen *Coccotrypes* Eichh., *Poecilips* Schauf., *Thamnurgides* Hopk. und *Dendrugus* nebst Beschreibung einer neuen Art. – Ent. Bericht. 18: 8–12.
- Schedl, K. E. 1938c. Die Einteilung der Pityophthorinae. – Arch. Naturgesch. 7: 157–188.
- Schedl, K. E. 1939. Some new Neotropical species of Scolytidae in the collection of the British Museum (Coleopt.). – Proc. R. ent. Soc. Lond. (B) 8: 12–16.
- Schedl, K. E. 1940a. Scolytidae, Coptonotidae y Platypodidae Mexicanos. – An. Esc. Nac. Cienc. Biol. Mexico 1: 317–377.
- Schedl, K. E. 1940b. Scolytidae und Platypodidae (Coleoptera). 51. Beitrag. – Arb. morphol. taxon. Ent. Berl. 7: 203–208.
- Schedl, K. E. 1948. On some new neotropical Scolytidae (Col.). – Revta Ent., Rio de J. 19: 575–579.
- Schedl, K. E. 1949a. Tropical seed beetles of the genus *Coccotrypes* Eichh. – Tijdschr. Ent. 91: 113–120.
- Schedl, K. E. 1949b. Neotropical Scolytoidea. I. 97th contribution to the morphology and taxonomy of the Scolytoidea (Col.). – Revta bras. Biol. 9: 261–284.
- Schedl, K. E. 1950. Neotropical Scolytoidea II. 107. Contribution to the morphology and taxonomy of the Scolytoidea. – Dusenja 1: 145–180.
- Schedl, K. E. 1951. Neotropische Scolytoidea IV. – Dusenja 2: 71–130.
- Schedl, K. E. 1952. Neotropische Scolytoidea III. Dusenja 3: 343–366.
- Schedl, K. E. 1954. Neotropische Scolytoidea, VI. 142. Beitrag zur Morphologie und Systematik der Scolytoidea. – Dusenja 5: 21–48.
- Schedl, K. E. 1957. A few scolytidae from the West Indies. – Il. N. Y. ent. Soc. 65: 191–194.
- Schedl, K. E. 1958. Zur Synonymie der Borkenkäfer II. 159. Beitrag zur Morphologie und Systematik der Scolytoidea. – Tijdschr. Ent. 101: 141–155.
- Schedl, K. E. 1961a. A few Scolytidae from Trinidad. 192. Contribution to the morphology and taxonomy of the Scolytoidea. – Ann. Mag. nat. Hist. 13 (3): 529–531.
- Schedl, K. E. 1961b. New species of bark and timber beetles from the neotropical region. 186. Contribution to the morphology and taxonomy of the Scolytoidea. – Pan-Pacif. Ent. 37: 223–233.
- Schedl, K. E. 1966. Neotropische Scolytoidea VIII. 238. Beitrag zur Morphologie und Systematik der Scolytoidea. – Ent. Arb. Mus. Frey 17: 74–128.
- Schedl, K. E. 1970. Neotropische Scolytoidea X. 270. Beitrag zur Morphologie und Systematik der Scolytoidea. – Koleopt. Rdsch. 48: 79–110.
- Schedl, K. E. 1972. Neotropische Scolytoidea XI. 293. Beitrag zur Morphologie und Systematik der Scolytidae. – Koleopt. Rdsch. 50: 37–86.
- Schedl, K. E. 1974. Zur Synonymie der Borkenkäfer XXIV. 306. Beitrag zur Morphologie und Systematik der Scolytoidea. Ent. Arb. Mus. Frey 25: 333–341.
- Schedl, K. E. 1977. Scolytoidea aus El Salvador. 327. Beitrag zur Morphologie und Taxonomie der Scolytoidea. – Arb. Österr. Ent. 29: 41–48.
- Schwarz, E. A. 1886. Remarks on some North American Scolytidae. – Entomologica am. 2: 40–42, 54–56.
- Schwarz, E. A. 1891. Contributions to the life-history of *Corthylus punctatissimus*, and description of *C. spinifer* n. sp. – Proc. ent. Soc. Wash. 2: 109–115.
- Schwarz, E. A. 1894a. A “parasitic” scolytid. – Proc. ent. Soc. Wash. 3: 15–17.
- Schwarz, E. A. 1894b. Description of two *Rhynchophorus* Coleoptera from semitropical Florida. – Proc. ent. Soc. Wash. 3: 42–45.
- Schwarz, E. A. 1920. A new scolytid beetle from tropical Florida. – Proc. ent. Soc. Wash. 22: 222–226.
- Stebbing, E. P. 1914. Indian forest insects of economic importance. Coleoptera. Eyre and Spottiswoode, London, 648 p.
- Strohmeyer, H. 1911. Zwei weitere neue Borkenkäfer aus Abessinien. – Ent. Bl. Biol. Syst. Käfer 7: 16–18.

- Swaine, J. M. 1915. New species of the family Ipidae (Coleoptera), Part II. – Can. Ent. 47: 355–369.
- Swaine, J. M. 1916. New species of the family Ipidae (Coleoptera), Part III. – Can. Ent. 48: 181–192.
- Swaine, J. M. 1917. Canadian bark-beetles, Part I. – Dom. Canada Dept. Agric. Ent. Br. Tech. Bull. 14: 1–32.
- Swaine, J. M. 1920. *Micracis popula* Swaine n. sp. In: M. W. Blackman, North American Ipidae of the subfamily Micracinae, with descriptions of new species and genera. – Miss. agric. Expt. Sta. Tech. Bull. 9.
- Swaine, J. M. 1924. The allies of *Ips confusus* LeC. in western America. Family Ipidae, Coleoptera. – Can. Ent. 56: 69–72.
- Swaine, J. M. 1925. New species of Ipidae (Coleoptera). – Can. Ent. 57: 192–197.
- Westwood, J. D. 1836. Description of a minute coleopterous insect, forming the type of a new subgenus allied to *Tomicus*, with some observations upon the affinities of the *Xylophaga*. – Trans. R. ent. Soc. Lond. 1: 34–36.
- Wollaston, T. V. 1864. Catalogue of the Coleopterous insects of the Canaries in the collection of the British Museum. London, 648 pp.
- Wood, S. L. 1954. A revision of North American Cryphalini (Scolytidae: Coleoptera). – Univ. Kansas Sci. Bull. 36: 959–1089.
- Wood, S. L. 1956. New species of bark beetles (Coleoptera: Scolytidae), mostly Mexican, Part I. – Can. Ent. 88: 141–154.
- Wood, W. L. 1961a. New records and species of Scolytidae (Coleoptera) from Colombia. – Gt. Basin Nat. 21: 1–7.
- Wood, S. L. 1961b. New species of bark beetles (Coleoptera: Scolytidae), mostly Mexican. Part VI. – Gt. Basin Nat. 21: 87–107.
- Wood, S. L. 1967. New records and species of Neotropical bark beetles (Coleoptera: Scolytidae) Part II. – Gt. Basin Nat. 27: 119–141.
- Wood, S. L. 1971. New records and species of neotropical bark beetles (Scolytidae: Coleoptera), Part V. – Brigham Young Univ. Sci. Bull., Biol. Ser. 15: 1–54.
- Wood, S. L. 1974. New species of American Corthylini (Coleoptera: Scolytidae). – Gt. Basin Nat. 34: 135–150.
- Wood, S. L. 1977. New synonymy and new species of American bark beetles (Coleoptera: Scolytidae), Part IV. – Gt. Basin Nat. 37: 207–220.
- Wood, S. L. 1978. New synonymy and new species of American bark beetles (Coleoptera: Scolytidae) Part VII. – Gt. Basin Nat. 38: 397–405.
- Wood, S. L. 1979. New synonymy and new species of American bark beetles (Coleoptera: Scolytidae), Part VIII. – Gt. Basin Nat. 39: 133–142.
- Wood, S. L. 1981. Nomenclatural changes and new species in Platypodidae and Scolytidae (Coleoptera). – Gt. Basin Nat. 41: 121–128.
- Wood, S. L. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. Gt. Basin Nat. Mem. 6. 1359 pp.
- Zimmermann, C. 1868. Synopsis of the Scolytidae of America north of Mexico. – Trans. Am. ent. Soc. 2: 141–149.

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